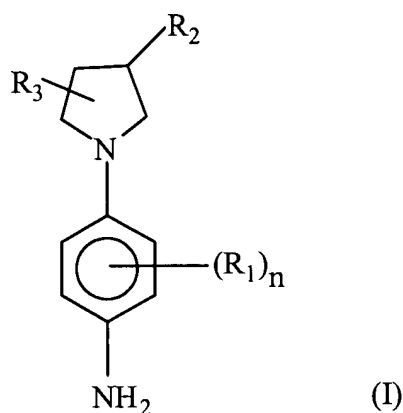


I. AMENDMENT

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) Dye composition for dyeing keratin fibres, comprising, in a medium that is suitable for dyeing, at least one cationic tertiary para-phenylenediamine containing a pyrrolidine nucleus and at least one vitamin derivative chosen from tocopherols and esters thereof, B vitamins and provitamins of B vitamins, and vitamin F, wherein said cationic tertiary paraphenylenediamine containing a pyrrolidine ring corresponds to formula I:



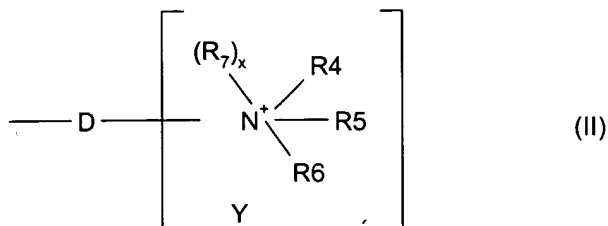
in which

n varies from 0 to 4, it being understood that when n is greater than or equal to 2, then the radicals R₁ may be identical or different,

R₁ represents a halogen atom; a saturated or unsaturated, aliphatic or alicyclic, C₄-C₆ hydrocarbon chain, it being possible for the chain to contain one or more oxygen, nitrogen, silicon or sulphur atoms or an SO₂ group, and it being possible for the chain to be substituted with one or more hydroxyl or amino radicals; an onium radical Z, the radical R₁ not containing a peroxide bond, or diazo, nitro or nitroso radicals, is chosen from chlorine, bromine, C₁-C₄ alkyl, C₁-C₄ hydroxyalkyl, C₁-C₄ aminoalkyl, C₁-C₄ alkoxy or C₁-C₄ hydroxyalkoxy radicals,

R₂ represents an onium radical Z or a radical X-C=NR₈-NR₉-R₁₀ in which X represents an oxygen atom or a radical -NR₁₁ and R₈, R₉, R₁₀ and R₁₁ represent a hydrogen

atom, a C₁-C₄ alkyl radical or a C₁-C₄ hydroxyalkyl radical, the onium radical Z corresponding to formula (II)



in which

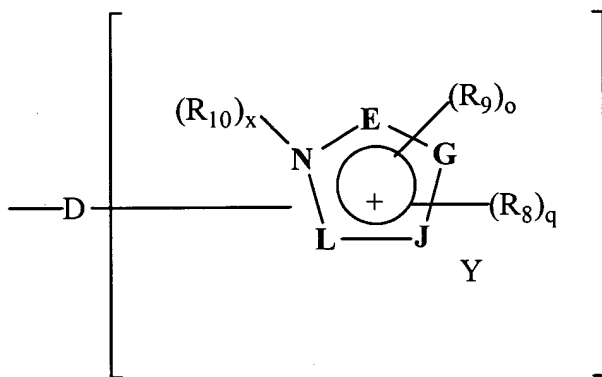
D is a single bond of a linear or branched C₁-C₁₄ alkylene chain which may contain one or more heteroatoms chosen from oxygen, sulphur or nitrogen, and which may be substituted with one or more hydroxyl, C₁-C₆ alkoxy or amino radicals and which may carry one or more ketone functional groups;

R₄, R₅ and R₆, taken separately, represent a C₁-C₁₅ alkyl radical;

x is 0 and the linking arm is attached to the nitrogen atom carrying the radicals R₄ to R₆;

Y is a counter-ion; or

R₂ represents the onium radical Z corresponding to formula III



(III)

in which

D is a single bond or a linear or branched C₁-C₁₄ alkylene chain which may contain one or more heteroatoms chosen from oxygen, sulphur or nitrogen,

and which may be substituted with one or more hydroxyl, C₁-C₆ alkoxy or amino radicals, and which may carry one or more ketone functional groups;

the vertices E, G, J and L form an imidazole ring;

q is an integer between 0 and 4 inclusive;

o is an integer between 0 and 3 inclusive;

q+o is an integer between 0 and 4;

the radicals R₈, which are identical or different, represent a halogen atom, a hydroxyl radical, a C₁-C₆ alkyl radical, a C₁-C₆ monohydroxyalkyl radical, a C₂-C₆ polyhydroxyalkyl radical, a C₁-C₆ alkoxy radical, a tri(C₁-C₆)alkylsilane(C₁-C₆)alkyl radical, an amido radical, a carboxyl radical, a C₁-C₆ alkylcarbonyl radical, a thio radical, a C₁-C₆ thioalkyl radical, a (C₁-C₆)alkylthio radical, an amino radical, an amino radical which is mono- or di-substituted with a (C₁-C₆)alkyl, (C₁-C₆)alkylcarbonyl, amido or (C₁-C₆)alkylsulphonyl radical; a C₁-C₆ monohydroxyalkyl radical or a C₂-C₆ polyhydroxyalkyl radical; it being understood that the radicals R₈ are carried by a carbon atom;

the radicals R₉, which are identical or different, represent a C₁-C₆ alkyl radical, a C₁-C₆ monohydroxyalkyl radical, a C₂-C₆ polyhydroxyalkyl radical, a tri(C₁-C₆)alkylsilane(C₁-C₆)alkyl radical, a (C₁-C₆)alkoxy(C₁-C₆)alkyl radical, a C₁-C₆ carbamylalkyl radical, a (C₁-C₆)alkylcarboxy(C₁-C₆)alkyl radical, a benzyl radical; it being understood that the radicals R₉ are carried by a nitrogen atom;

R₁₀ represents a C₁-C₆ alkyl radical; a C₁-C₆ monohydroxyalkyl radical; a C₂-C₆ polyhydroxyalkyl radical; an aryl radical; a benzyl radical; a C₁-C₆ aminoalkyl radical, a C₁-C₆ aminoalkyl radical whose amine is substituted with a (C₁-C₆)alkyl, (C₁-C₆)alkylcarbonyl, amido or (C₁-C₆)alkylsulphonyl radical; a C₁-C₆ carboxyalkyl radical; a C₁-C₆ carbamylalkyl radical; a C₁-C₆ trifluoroalkyl radical; a tri(C₁-C₆)alkylsilane(C₁-C₆)alkyl radical; a C₁-C₆ sulphonamidoalkyl radical; a (C₁-C₆)alkylcarboxy(C₁-C₆)alkyl radical; a (C₁-C₆)alkylsulphinyl(C₁-C₆)alkyl radical; a (C₁-C₆)alkylsulphonyl(C₁-

C₆alkyl radical; a (C₁-C₆)alkylcarbonyl(C₁-C₆)alkyl radical; an N-(C₁-C₆)alkylcarbamyl(C₁-C₆)alkyl radical; an N-(C₁-C₆)alkylsulphonamido(C₁-C₆)alkyl radical;

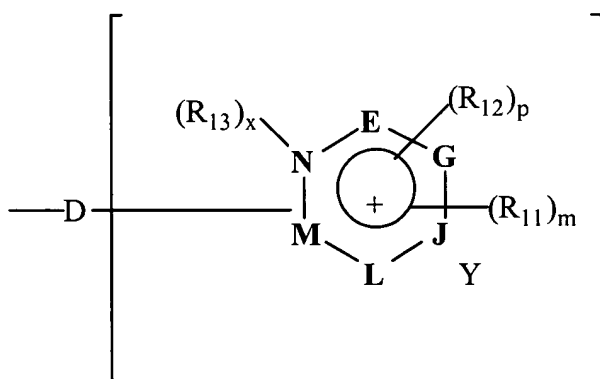
x is 0 or 1

when x = 0, the linking arm D is attached to the nitrogen atom,

when x = 1, the linking arm D is attached to one of the vertices E, G, J or L;

Y is a counter-ion; or

R₂ represents an onium radical Z corresponding to formula IV



(IV)

in which:

D is a single bond or a linear or branched C₁-C₁₄ alkylene chain which may contain one or more heteroatoms chosen from an oxygen, sulphur or nitrogen atom, and which may be substituted with one or more hydroxyl, C₁-C₆ alkoxy or amino radicals, and which may carry one or more ketone functional groups;

the vertices E, G, J, L and M form, with the nitrogen of the ring, a ring chosen from pyridine and pyrimidine rings;

p is an integer between 0 and 3 inclusive;

m is an integer between 0 and 5 inclusive;

p+m is an integer between 0 and 5;

the radicals R_{11} , which are identical or different, represent a halogen atom, a hydroxyl radical, a C_1 - C_6 alkyl radical, a C_1 - C_6 monohydroxyalkyl radical, a C_2 - C_6 polyhydroxyalkyl radical, a C_1 - C_6 alkoxy radical, a tri(C_1 - C_6)alkylsilane(C_1 - C_6)alkyl radical, an amido radical, a carboxyl radical, a C_1 - C_6 alkylcarbonyl radical, a thio radical, a C_1 - C_6 thioalkyl radical, a (C_1 - C_6)alkylthio radical, an amino radical, an amino radical which is substituted with a (C_1 - C_6)alkyl, (C_1 - C_6)alkylcarbonyl, amido or (C_1 - C_6)alkylsulphonyl radical; a C_1 - C_6 monohydroxyalkyl radical or a C_2 - C_6 polyhydroxyalkyl radical; it being understood that the radicals R_{11} are carried by a carbon atom;

the radicals R_{12} , which are identical or different, represent a C_1 - C_6 alkyl radical, a C_1 - C_6 monohydroxyalkyl radical, a C_2 - C_6 polyhydroxyalkyl radical, a tri(C_1 - C_6)alkylsilane(C_1 - C_6)alkyl radical, a (C_1 - C_6)alkoxy(C_1 - C_6)alkyl radical, a C_1 - C_6 carbamylalkyl radical, a (C_1 - C_6)alkylcarboxy(C_1 - C_6)alkyl radical, a benzyl radical; it being understood that the radicals R_{12} are carried by a nitrogen atom;

R_{13} represents a C_1 - C_6 alkyl radical; a C_1 - C_6 monohydroxyalkyl radical; a C_2 - C_6 polyhydroxyalkyl radical; an aryl radical; a benzyl radical; a C_1 - C_6 aminoalkyl radical, a C_1 - C_6 aminoalkyl radical whose amine is mono- or di-substituted with a (C_1 - C_6)alkyl, (C_1 - C_6)alkylcarbonyl, amido or (C_1 - C_6)alkylsulphonyl radical; a C_1 - C_6 carboxyalkyl radical; a C_1 - C_6 carbamylalkyl radical; a C_1 - C_6 trifluoroalkyl radical; a tri(C_1 - C_6)alkylsilane(C_1 - C_6)alkyl radical; a C_1 - C_6 sulphonamidoalkyl radical; a (C_1 - C_6)alkylcarboxy(C_1 - C_6)alkyl radical; a (C_1 - C_6)alkylsulphinyl(C_1 - C_6)alkyl radical; a (C_1 - C_6)alkylsulphonyl(C_1 - C_6)alkyl radical; a (C_1 - C_6)alkylcarbonyl(C_1 - C_6)alkyl radical; an N-(C_1 - C_6)alkylcarbamyl(C_1 - C_6)alkyl radical; an N-(C_1 - C_6)alkylsulphonamido(C_1 - C_6)alkyl radical;

x is 0 or 1

when x = 0, the linking arm D is attached to the nitrogen atom,

when x = 1, the linking arm D is attached to one of the vertices E, G, J, L or M,

Y is a counter-ion;

R₃ represents a hydrogen atom or a hydroxyl radical.

2. (Canceled)
3. (Previously presented) The composition of claim 1, wherein the cationic tertiary para-phenylenediamine is such that n is equal to 0.
4. (Currently amended) The composition of claim 1, wherein the cationic tertiary para-phenylenediamine is such that n is equal to 1 and ~~R₁ is chosen from the group consisting of a halogen atom; a saturated or unsaturated, aliphatic or alicyclic, C₁-C₆ hydrocarbon chain; it being possible for one or more carbon atoms to be replaced by an oxygen, nitrogen, silicon or sulphur atom, or by an SO₂ group, the radical R₁ not containing a peroxide bond, or diazo, nitro or nitroso radicals.~~
5. (Canceled)
6. (Currently amended) The composition of claim [[5]] 1, wherein the cationic tertiary para-phenylenediamine is such that R₁ is chosen from a methyl, hydroxymethyl, 2-hydroxyethyl, 1,2-dihydroxyethyl, methoxy, isopropoxy or 2-hydroxyethoxy radical.
7. (Canceled)
8. (Currently amended) The composition of claim [[7]] 1, wherein the cationic tertiary para-phenylenediamine is such that R₂ corresponds to formula II in which x is equal to 0 and R₄, R₅ and R₆, separately, are ~~preferably~~ chosen from a C₁-C₆ alkyl radical, a C₁-C₄ monohydroxyalkyl radical, a C₂-C₄ polyhydroxyalkyl radical, a (C₁-C₆)alkoxy(C₁-C₄)alkyl radical, a C₁-C₆ amidoalkyl radical, a tri(C₁-C₆)alkylsilane(C₁-C₆)alkyl radical, or R₄ with R₅ form together an azetidine ring, a pyrrolidine, piperidine, piperazine or morpholine ring, R₆ being chosen in this case from a C₁-C₆ alkyl radical, a C₁-C₆ monohydroxyalkyl radical, a C₂-C₆ polyhydroxyalkyl radical, a C₁-C₆ aminoalkyl radical, an aminoalkyl radical which is mono or di-substituted with a (C₁-C₆)alkyl radical, a (C₁-C₆)alkylcarbonyl, amido or (C₁-C₆)alkylsulphonyl radical, a C₁-C₆ carbamylalkyl radical, a tri(C₁-C₆)alkylsilane(C₁-C₆)alkyl radical, a (C₁-C₆)alkyl carboxy(C₁-C₆)alkyl radical, a (C₁-C₆)alkylcarbonyl(C₁-C₆)alkyl radical, an N-(C₁-C₆)alkylcarbamyl(C₁-C₆)alkyl radical.

9-10. (Canceled)

11. (Currently amended) The composition of claim [[7]] 1, wherein the cationic tertiary para-phenylenediamine is such that R_2 is a trialkylammonium radical.

12-13. (Canceled)

14. (Currently amended) The composition of claim [[12]] 1, wherein the cationic tertiary para-phenylenediamine is such that R_2 represents an onium radical Z corresponding to formula III, x is equal to 0, and D is a single bond or an alkylene chain that may be substituted.

15-16. (Canceled)

17. (Currently amended) The composition of claim [[15]] 1, wherein the cationic tertiary para-phenylenediamine is such that R_2 represents an onium radical Z corresponding to formula IV, x is equal to 0, and R_{11} is chosen from a hydroxyl radical, a C_1 - C_6 alkyl radical, a C_1 - C_6 monohydroxyalkyl radical, a C_2 - C_6 polyhydroxyalkyl radical, a C_1 - C_6 alkoxy radical, a tri(C_1 - C_6)alkylsilane(C_1 - C_6)alkyl radical, an amido radical, a C_1 - C_6 alkylcarbonyl radical, an amino radical, an amino radical which is mono- or di-substituted with a (C_1 - C_6)alkyl, a (C_1 - C_6)alkylcarbonyl, amido or (C_1 - C_6)alkylsulphonyl radical; a C_1 - C_6 monohydroxyalkyl radical or a C_2 - C_6 polyhydroxyalkyl radical and R_{12} is chosen from a C_1 - C_6 alkyl radical, a C_1 - C_6 monohydroxyalkyl radical, a C_2 - C_6 polyhydroxyalkyl radical, a tri(C_1 - C_6)alkylsilane(C_1 - C_6)alkyl radical, a (C_1 - C_6)alkoxy(C_1 - C_6)alkyl radical, a C_1 - C_6 carbamylalkyl radical.

18. (Currently amended) The composition of claim [[15]] 1, wherein the cationic tertiary para-phenylenediamine is such that R_2 represents an onium radical Z corresponding to formula IV, x is equal to 1, and R_{13} is chosen from a C_1 - C_6 alkyl radical; a C_1 - C_6 monohydroxyalkyl radical; a C_2 - C_6 polyhydroxyalkyl radical; a C_1 - C_6 aminoalkyl radical, a C_1 - C_6 aminoalkyl radical whose amine is mono- or di-substituted with a (C_1 - C_6)alkyl radical, a (C_1 - C_6)alkylcarbonyl radical, an amido radical, a (C_1 - C_6)alkylsulphonyl radical; a C_1 - C_6 carbamylalkyl radical; a tri(C_1 - C_6)alkylsilane(C_1 - C_6)alkyl radical; a (C_1 - C_6)alkylcarbonyl(C_1 - C_6)alkyl radical; an N-(C_1 - C_6)alkylcarbamyl(C_1 - C_6)alkyl radical; R_{11} is chosen from a hydroxyl radical, a C_1 - C_6 alkyl radical, a C_1 - C_6 monohydroxyalkyl radical, a C_2 - C_6 polyhydroxyalkyl radical, a C_1 - C_6 alkoxy radical, a tri(C_1 - C_6)alkylsilane(C_1 - C_6)alkyl radical, an amido radical, a C_1 - C_6 alkylcarbonyl radical, an amino radical, an amino radical which is mono- or di-substituted

with a (C₁-C₆)alkyl, (C₁-C₆)alkylcarbonyl, amido or (C₁-C₆)alkylsulphonyl radical; and R₁₂ is chosen from a C₁-C₆ alkyl radical, a C₁-C₆ monohydroxyalkyl radical, a C₂-C₆ polyhydroxyalkyl radical, a tri(C₁-C₆)alkylsilane(C₁-C₆)alkyl radical, a (C₁-C₆)alkoxy(C₁-C₆)alkyl radical, a C₁-C₆ carbamylalkyl radical.

19. (Currently amended) The composition of claim [[15]] 1, wherein the cationic tertiary para-phenylenediamine is such that R₂ represents an onium radical Z corresponding to formula IV, and R₁₁, R₁₂ and R₁₃ are alkyl radicals that be substituted.

20-21. (Canceled)

22. (Currently amended) The composition of claim 1, wherein the cationic tertiary para-phenylene is chosen from the group formed by:

[1-(4-Aminophenyl)pyrrolidin-3-yl]trimethylammonium chloride[[:]]

[1-(4-Aminophenyl)pyrrolidin-3-yl]dimethyltetradecylammonium bromide[[:]]

~~N'-[1-(4-Aminophenyl)pyrrolidin-3-yl]-N,N-dimethylguanidine;~~

~~N-[1-(4-Aminophenyl)pyrrolidin-3-yl]guanidine;~~

3-[1-(4-Aminophenyl)pyrrolidin-3-yl]-1-methyl-3H-imidazol-1-ium chloride[[:]]

~~[1-(4-Aminophenyl)pyrrolidin-3-yl](2-hydroxyethyl)dimethylammonium chloride;~~

~~[1-(4-Aminophenyl)pyrrolidin-3-yl]dimethyl(3-trimethylsilylpropyl)ammonium chloride;~~

~~[1-(4-Aminophenyl)pyrrolidin-3-yl](trimethylammonium-hexyl)dimethylammonium dichloride~~

~~[1-(4-Aminophenyl)pyrrolidin-3-yl]oxophosphorylcholine~~

~~{2-[1-(4-Aminophenyl)pyrrolidin-3-yloxy]ethyl}-trimethylammonium chloride~~

~~1-{2-[1-(4-Aminophenyl)pyrrolidin-3-yloxy]ethyl}-1-methylpyrrolidinium chloride~~

~~3-{3-[1-(4-Aminophenyl)pyrrolidin-3-yloxy]propyl}-1-methyl-3H-imidazol-1-ium chloride~~

~~1-{2-[1-(4-Aminophenyl)pyrrolidin-3-yloxy]ethyl}-1-methylpiperidinium
chloride~~
~~3-{3-[1-(5-Trimethylsilanylethyl-4-amino-3-
trimethylsilanylethylphenyl)pyrrolidin-3-yloxy]propyl}-1-methyl-3H-
imidazol-1-ium chloride~~
 [1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]trimethylammonium chloride[[:]]
 [1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]dimethyltetradecylammonium chloride[[:]]
~~N'-[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]-N,N-dimethylguanidine;~~
~~N-[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]guanidine;~~
 3-[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]-1-methyl-3H-imidazol-1-ium
chloride[[:]]
~~[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl](2-hydroxyethyl)dimethylammonium
chloride;~~
~~[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]dimethyl(3-trimethylsilanylpropyl
ammonium chloride;~~
~~[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl](trimethyl-
ammoniumhexyl)dimethylammonium dichloride~~
~~[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]oxophosphorylcholine~~
 {2-[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yloxy]ethyl}-trimethylammonium chloride
~~1-{2-[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yloxy]ethyl}-1-methylpyrrolidinium
chloride~~
 3-{3-[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yloxy]propyl}-1-methyl-3H-imidazol-
1-ium chloride
~~1-{2-[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yloxy]ethyl}-1-methylpiperidinium
chloride~~
~~[1-(4-Amino-3-trimethylsilanylethylphenyl)pyrrolidin-3-yl]trimethylammonium
chloride~~

~~3-[1-(4-Amino-3-trimethylsilanylethylphenyl)pyrrolidin-3-yl]-1-methyl-3H-imidazol-1-ium chloride~~
~~3-{3-[1-(4-Amino-3-trimethylsilanylethylphenyl)pyrrolidin-3-yloxy]propyl}-1-methyl-3H-imidazol-1-ium chloride~~
~~[1-(5-Trimethylsilanylethyl-4-amino-3-trimethylsilanylethylphenyl)pyrrolidin-3-yl]trimethylammonium chloride~~
~~3-[1-(5-trimethylsilanylethyl-4-Amino-3-trimethylsilyl-ethylphenyl)pyrrolidin-3-yl]-1-methyl-3H-imidazol-1-ium chloride~~
~~1'-(4-Aminophenyl)-1-methyl[1,3']bipyrrolidinyl-1-ium chloride;~~
~~1'-(4-Amino-3-methylphenyl)-1-methyl[1,3']bipyrrolidinyl-1-ium chloride;~~
 3-{{1-(4-Aminophenyl)pyrrolidin-3-ylcarbamoyl}methyl}-1-methyl-3H-imidazol-1-ium chloride[;]
 3-{{1-(4-Aminophenyl)pyrrolidin-3-ylcarbamoyl}methyl}-1-methyl-3H-imidazol-1-ium chloride[;]
 3-[1-(4-Aminophenyl)pyrrolidin-3-yl]-1-(3-trimethylsilylpropyl)-3H-imidazol-1-ium chloride[;]
 3-[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]-1-(3-trimethylsilylpropyl)-3H-imidazol-1-ium chloride[;]
 [1-(4-Aminophenyl)pyrrolidin-3-yl]ethyltrimethylammonium chloride[;]
 [1-(4-Aminophenyl)pyrrolidin-3-yl]ethyltrimethylammonium iodide[;]
 [1-(4-Aminophenyl)pyrrolidin-3-yl]propyltrimethylammonium iodide[;]
 [1-(4-Aminophenyl)pyrrolidin-3-yl]propyltrimethylammonium bromide[;]
 [1-(4-Aminophenyl)pyrrolidin-3-yl]propyltrimethylammonium methosulphate[;]
 [1-(4-Aminophenyl)pyrrolidin-3-yl]butyltrimethylammonium iodide[;]
 [1-(4-Aminophenyl)pyrrolidin-3-yl]pentyltrimethylammonium iodide[;]
 [1-(4-Aminophenyl)pyrrolidin-3-yl]hexyltrimethylammonium iodide[;]
 [1-(4-Aminophenyl)pyrrolidin-3-yl]heptyltrimethylammonium iodide[;]

[1-(4-Aminophenyl)pyrrolidin-3-yl]octyldimethylammonium iodide[[:]]
 [1-(4-Aminophenyl)pyrrolidin-3-yl]decyldimethylammonium iodide[[:]]
 [1-(4-Aminophenyl)pyrrolidin-3-yl]hexadecyldimethylammonium iodide[[:]]
~~[1-(4-Aminophenyl)pyrrolidin-3-yl]hydroxyethyl dimethylammonium chloride;~~
~~[1-(4-Aminophenyl)pyrrolidin-3-yl]hydroxyethyl dimethylammonium iodide.~~

23. (Currently amended) The composition of claim 1, wherein the cationic tertiary para-phenylenediamine is chosen from the group formed by:

[1-(4-Aminophenyl)pyrrolidin-3-yl]trimethylammonium chloride[[:]]
 [1-(4-Aminophenyl)pyrrolidin-3-yl]dimethyltetradecylammonium bromide[[:]]
~~N' [1-(4-Aminophenyl)pyrrolidin-3-yl]-N,N-dimethylguanidine;~~
~~N [1-(4-Aminophenyl)pyrrolidin-3-yl]guanidine;~~
 3-[1-(4-Aminophenyl)pyrrolidin-3-yl]-1-methyl-3H-imidazol-1-ium chloride[[:]]
~~[1-(4-Aminophenyl)pyrrolidin-3-yl](2-hydroxyethyl)dimethylammonium chloride;~~
~~[1-(4-Aminophenyl)pyrrolidin-3-yl]dimethyl(3-trimethylsilylpropyl)ammonium chloride;~~
 [1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]trimethylammonium chloride
 [1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]dimethyltetradecylammonium chloride[[:]]
~~N' [1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]-N,N-dimethylguanidine;~~
~~N [1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]guanidine;~~
 3-[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]-1-methyl-3H-imidazol-1-ium chloride[[:]]
~~[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl](2-hydroxyethyl)dimethylammonium chloride;~~
~~[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]dimethyl(3-trimethylsilylpropyl)ammonium chloride;~~
~~1'-(4-Aminophenyl)-1-methyl[1,3']bipyrrolidinyl-1-ium chloride;~~

~~1'-(4-Amino-3-methylphenyl)-1-methyl[1,3']bipyrrolidinyl-1-ium chloride;~~
 3-{[1-(4-Aminophenyl)pyrrolidin-3-ylcarbamoyl]methyl}-1-methyl-3H-imidazol-1-ium
 chloride[;]
 3-{[1-(4-Amino-3-methylphenyl)pyrrolidin-3-ylcarbamoyl]methyl}-1-methyl-3H-
 imidazol-1-ium chloride[;]
 3-[1-(4-Aminophenyl)pyrrolidin-3-yl]-1-(3-trimethylsilylpropyl)-3H-imidazol-1-ium
 chloride[;]
 3-[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]-1-(3-trimethylsilylpropyl)-3H-
 imidazol-1-ium chloride[;]
 [1-(4-Aminophenyl)pyrrolidin-3-yl]ethyltrimethylammonium chloride[;]
 [1-(4-Aminophenyl)pyrrolidin-3-yl]ethyltrimethylammonium iodide[;]
 [1-(4-Aminophenyl)pyrrolidin-3-yl]propyltrimethylammonium iodide[;]
 [1-(4-Aminophenyl)pyrrolidin-3-yl]propyltrimethylammonium bromide[;]
 [1-(4-Aminophenyl)pyrrolidin-3-yl]propyltrimethylammonium methanesulphate[;]
 [1-(4-Aminophenyl)pyrrolidin-3-yl]butyltrimethylammonium iodide[;]
 [1-(4-Aminophenyl)pyrrolidin-3-yl]pentyltrimethylammonium iodide[;]
 [1-(4-Aminophenyl)pyrrolidin-3-yl]hexyltrimethylammonium iodide[;]
 [1-(4-Aminophenyl)pyrrolidin-3-yl]heptyltrimethylammonium iodide[;]
 [1-(4-Aminophenyl)pyrrolidin-3-yl]octyltrimethylammonium iodide[;]
 [1-(4-Aminophenyl)pyrrolidin-3-yl]decyltrimethylammonium iodide[;]
 [1-(4-Aminophenyl)pyrrolidin-3-yl]hexadecyltrimethylammonium iodide[;]
~~[1-(4-Aminophenyl)pyrrolidin-3-yl]hydroxyethyltrimethylammonium chloride;~~
~~[1-(4-Aminophenyl)pyrrolidin-3-yl]hydroxyethyltrimethylammonium iodide.~~

24. (Currently amended) The composition of claim 1, wherein the cationic tertiary para-phenylenediamine is chosen from the group formed by:

[1-(4-Aminophenyl)pyrrolidin-3-yl]trimethylammonium chloride[;]

~~[1-(4-Aminophenyl)pyrrolidin-3-yl]dimethyltetradecylammonium bromide[[:]]~~
~~N'-[1-(4-Aminophenyl)pyrrolidin-3-yl]-N,N-dimethylguanidine;~~
~~N-[1-(4-Aminophenyl)pyrrolidin-3-yl]guanidine;~~
~~3-[1-(4-Aminophenyl)pyrrolidin-3-yl]-1-methyl-3H-imidazol-1-ium chloride[[:]]~~
~~[1-(4-Aminophenyl)pyrrolidin-3-yl](2-hydroxyethyl)dimethylammonium chloride;~~
~~[1-(4-Aminophenyl)pyrrolidin-3-yl]dimethyl(3-trimethylsilylpropyl)ammonium chloride;~~
~~[1-(4-Aminophenyl)pyrrolidin-3-yl](trimethylammonium-hexyl)dimethylammonium dichloride;~~
~~1'-(4-Aminophenyl)-1-methyl[1,3']bipyrrolidinyl-1-ium chloride~~
~~3-[1-(4-Aminophenyl)pyrrolidin-3-yl]-1-(3-trimethylsilylpropyl)-3H-imidazol-1-ium chloride[[:]]~~
~~3-[1-(4-Amino-3-methylphenyl)pyrrolidin-3-yl]-1-(3-trimethylsilylpropyl)-3H-imidazol-1-ium chloride[[:]]~~
~~[1-(4-aminophenyl)pyrrolidin-3-yl]ethyltrimethylammonium chloride[[:]]~~
~~[1-(4-Aminophenyl)pyrrolidin-3-yl]ethyltrimethylammonium iodide[[:]]~~
~~[1-(4-Aminophenyl)pyrrolidin-3-yl]propyltrimethylammonium iodide[[:]]~~
~~[1-(4-Aminophenyl)pyrrolidin-3-yl]propyltrimethylammonium bromide[[:]]~~
~~[1-(4-Aminophenyl)pyrrolidin-3-yl]propyltrimethylammonium methosulphate[[:]]~~
~~[1-(4-Aminophenyl)pyrrolidin-3-yl]butyltrimethylammonium iodide[[:]]~~
~~[1-(4-Aminophenyl)pyrrolidin-3-yl]pentyltrimethylammonium iodide[[:]]~~
~~[1-(4-Aminophenyl)pyrrolidin-3-yl]hexyltrimethylammonium iodide[[:]]~~
~~[1-(4-Aminophenyl)pyrrolidin-3-yl]heptyltrimethylammonium iodide[[:]]~~
~~[1-(4-Aminophenyl)pyrrolidin-3-yl]octyltrimethylammonium iodide[[:]]~~
~~[1-(4-Aminophenyl)pyrrolidin-3-yl]decyltrimethylammonium iodide[[:]]~~
~~[1-(4-Aminophenyl)pyrrolidin-3-yl]hexadecyltrimethylammonium iodide[[:]]~~
~~[1-(4-Aminophenyl)pyrrolidin-3-yl]hydroxyethyltrimethylammonium chloride;~~

~~[1-(4-Aminophenyl)pyrrolidin-3-yl]hydroxyethyl~~dimethylammonium iodide.

25. (Currently amended) The composition of claim 1, wherein the cationic tertiary para-phenylenediamine is chosen from the group formed by:

[1-(4-Aminophenyl)pyrrolidin-3-yl]trimethylammonium chloride[[:]]

3-[1-(4-Aminophenyl)pyrrolidin-3-yl]-1-methyl-3H-imidazol-1-ium chloride[[:]]

~~[1-(4-Aminophenyl)pyrrolidin-3-yl](2-hydroxyethyl)dimethylammonium chloride;~~

~~1'-(4-Aminophenyl)-1-methyl[1,3']bipyrrolidinyl-1-ium chloride.~~

26. (Currently amended) The composition of claim 1, wherein the cationic tertiary para-phenylenediamine is ~~chosen from the group formed by:~~

[1-(4-Aminophenyl)pyrrolidin-3-yl]trimethylammonium chloride ~~and~~

~~[1-(4-Aminophenyl)pyrrolidin-3-yl](2-hydroxyethyl)dimethyl—ammonium chloride.~~

27. (Original) The composition of claim 1, wherein the vitamin derivative is chosen from α -tocopherol and its esters, β -tocopherol, γ -tocopherol, δ -tocopherol, ϵ -tocopherol, ζ_1 -tocopherol, ζ_2 -tocopherol and η -tocopherol.

28. (Original) The composition of claim 27, wherein the vitamin derivative is vitamin E.

29. (Original) The composition of claim 27, wherein the vitamin derivative is chosen from vitamin E acetate and vitamin E palmitate.

30. (Currently amended) The ~~composition~~ composition of claim 1, wherein the vitamin derivative is chosen from pantothenic acid, niacinamide, nicotinic acid, inositol, biotin, thiamine, riboflavin, pyridoxine, carnitine and folic acid.

31. (Original) The composition of claim 30, wherein the vitamin derivative is pantothenic acid.

32. (Original) The composition of claim 1, wherein the vitamin derivative is pantothenol.

33. (Currently amended) The composition of claim 1, wherein the cationic tertiary para-phenylenediamine(s) containing a pyrrolidine nucleus represent(s) from about 0.001% to about 10% by weight relative to the total weight of the composition.
34. (Currently amended) The composition of claim 1, wherein the vitamin derivative(s) represent(s) from about 0.0001% to about 10%.
35. (Currently amended) The composition of claim 34, wherein the vitamin derivative(s) represent(s) from about 0.01% to about 2% by weight relative to the total weight of the composition.
36. (Original) The composition of claim 1, wherein the composition further comprises at least one cationic polymer.
37. (Original) The composition of claim 1, wherein the composition further comprises at least one thickening polymer.
38. (Original) The composition of claim 1, wherein the composition further comprises at least one surfactant chosen from the group formed by anionic surfactants, amphoteric or zwitterionic surfactants, nonionic surfactants and cationic surfactants.
39. (Original) The composition of claim 1, wherein the composition further comprises at least one additional oxidation base other than cationic tertiary para-phenylenediamines containing a pyrrolidine nucleus, chosen from para-phenylenediamines, bis(phenyl)alkylenediamines, para-aminophenols, ortho-aminophenols and heterocyclic bases, and the addition salts thereof.
40. (Currently amended) The composition of claim 39, wherein the additional oxidation base(s) is (are) present in an amount of between about 0.001% and about 20% by weight relative to the total weight of the composition.
41. (Original) The composition of claim 1, wherein the composition further comprises at least one coupler chosen from meta-phenylenediamines, meta-aminophenols, meta-diphenols, naphthalene-based couplers and heterocyclic couplers, and the addition salts thereof.
42. (Original) The composition of claim 41, wherein the coupler is chosen from 1,3-dihydroxybenzene, 1,3-dihydroxy-2-methylbenzene, 4-chloro-1,3-dihydroxybenzene,

2,4-diamino-1-(β -hydroxyethyloxy)benzene, 2-amino-4-(β -hydroxyethylamino)-1-methoxybenzene, 1,3-diaminobenzene, 1,3-bis(2,4-diaminophenoxy)propane, 3-ureidoaniline, 3-ureido-1-dimethylaminobenzene, sesamol, 1- β -hydroxyethylamino-3,4-methylenedioxybenzene, α -naphthol, 2-methyl-1-naphthol, 6-hydroxyindole, 4-hydroxyindole, 4-hydroxy-N-methylindole, 2-amino-3-hydroxypyridine, 6-hydroxybenzomorpholine, 3,5-diamino-2,6-dimethoxypyridine, 1-N-(β -hydroxyethyl)amino-3,4-methylenedioxybenzene and 2,6-bis(β -hydroxyethylamino)toluene, and the addition salts thereof.

43. (Currently amended) The composition of claim 41, wherein the coupler(s) is (are) present in an amount of between about 0.001% and about 20% by weight relative to the total weight of the composition.

44. (Original) The composition of claim 1, wherein the composition further comprises at least one direct dye.

45. (Original) The composition of claim 1, wherein the composition further comprises at least one hydroxylated solvent such as ethanol, propylene glycol, glycerol and polyol monoethers.

46. (Original) The composition of claim 1, wherein the composition further comprises an oxidizing agent chosen from hydrogen peroxide, urea peroxide, alkali metal bromates, persalts, peracids and oxydase enzymes, and preferably hydrogen peroxide.

47. (Original) A process for the oxidation dyeing of keratin fibres, wherein a dye composition as defined in claim 1 is applied to fibres in the presence of an oxidizing agent.

48. (Original) A multi-compartment device, in which a first compartment comprises a dye composition for dyeing keratin fibres, as defined in claim 1, and a second compartment comprises an oxidizing agent.

49. (Canceled)

II. RESPONSE TO OFFICE ACTION

A. Status of the Claims

Claims 1 and 3-49 were pending at the time of the Action. Claims 1, 3-8, 10-11, and 22-49 stand rejected, and claims 9 and 12-21 are objected to. Claims 5, 7, 9-10, 12-13, 15-16, 20-21, and 49 have been canceled, and claims 1, 4, 6, 8, 11, 14, 17-19, 22-26, 30, 33-35, 40, and 43 have been amended in the Amendment contained herein. No new matter is added by the Amendment, and support for the Amendment can be found in the specification and claims as originally filed. Therefore, claims 1, 3-4, 6, 8, 11, 14, 17-19, and 22-48 are pending after entry of the Amendment.

B. Examiner Interview Summary

On September 27, 2005, Applicants' representative Mark Wilson phoned Examiner Elhilo. Applicants and Examiner Elhilo discussed the final Official Action dated August 2, 2005 and potential strategies for obtaining allowance of the claims. Examiner Elhilo noted that claims 9 and 12-21 would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. Examiner Elhilo indicated that if Applicants import the limitations from claims 9 and 12-21 into independent claim 1, he would consider such amendments. Further, Examiner Elhilo indicated that he would allow the claims if such amendments place the claims in condition for allowance. As detailed below, Applicants have amended the claims, in part, to incorporate several of Examiner Elhilo's suggestions. Applicants again wish to thank Examiner Elhilo for his time and attention to this file so that its prosecution can advance to issuance.

C. The Obviousness Rejections Are Overcome

1. Claims 1, 3-4, 6, 8, 11, and 22-48 are not Obvious Over Laurent in View of Lim and Further in View of Cannell

Claims 1, 3-4, 6, 8, 11, and 22-48 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Laurent et al. (US 2002/0046431) ("Laurent") in view of Lim et al. (US 6,461,391) ("Lim") and further in view of Cannell et al. (US 5,681,554) ("Cannell"). Applicants traverse this rejection.

Applicants note that independent claim 1 (which all of the other pending claims either depend from or incorporate by reference) has been amended herein, in part, to incorporate some or all of the limitations from claims 5, 7, 12, 13, 15, and 16. The limitations imported from claims 12, 13, 15, and 16 involve claimed formulae (III) and (IV). Applicants note that the Action states that the prior art of record (including Laurent, Lim, and Cannell) does not teach or disclose para-phenylenediamine compounds of the claimed formulae (III) and (IV). Applicants concur that para-phenylenediamine compounds of the claimed formulae (III) and (IV) are not taught or disclosed by the prior art. For at least this reason, the obviousness rejection is improper and should be withdrawn, as a *prima facie* case of obviousness does not exist when the prior art references fail to teach or suggest each and every limitation of the claims. See *In re Royka*, 490 F.2d 981 (CCPA 1974); MPEP § 2143.03.

With regard to those compounds encompassed by claim 1 that do not involve formulae (III) or (IV), Applicants submit that the obviousness rejection is nevertheless improper and should be withdrawn. The Action fails to establish that there is a motivation to combine the teachings of Laurent with those of Lim and Cannell. When obviousness is based on the teachings of multiple prior art references, the Action must establish some “suggestion, teaching, or motivation” that would have led a person of ordinary skill in the art to combine the relevant prior art teachings in the manner claimed. See *Tech Air, Inc. v. Denso Mfg. Mich, Inc.*, 192 F.3d 1353, 1358-60 (Fed. Cir. 1999); *Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1572 (Fed. Cir. 1996).

The Action provides **no** substantive explanation of **why** or **how** a person of skill in the art would be motivated to combine the teachings of Laurent with those of Lim and Cannell to achieve what Applicants have done. The Action merely puts forth the conclusory statement that “one having ordinary skill in the art at the time the invention was made would be motivated to formulate such a dyeing composition by substituting the heterocyclic para-phenylenediamine oxidation base of Laurent et al. by the cationic tertiary para-phenylenediamines as taught by Lim et al. and to

incorporate the vitamins as taught by Cannell et al. in the composition of Laurent et al.” The Action, p. 4. As stated in MPEP § 2143.01, “The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.”

Laurent teaches a specific dyeing composition directed to slowing the development of the oxidizing agent, requiring a composition comprising a combination of either an oxyalkylated fatty alcohol or a glycerolated fatty alcohol and a hydroxylated solvent in addition to an oxidative dye and a cationic amphiphilic polymer comprising at least one fatty acid. Laurent broadly discloses suitable oxidant dyes, such that “representative oxidation dyes include ortho- phenylenediamines, para-phenylenediamines, double bases, ortho-aminophenols, para-aminophenols, heterocyclic bases and their acid addition salts.” Laurent, paragraph 0264. The para-phenylenediamines are themselves broadly disclosed in a generic formula, wherein the thousands of potential structures include, once the “R” groups have been suitably parsed, pyrrolidine derivatives. Lim discloses “useful hair coloring systems [that] comprise quaternized pyrrolidone compounds.” Lim, Abstract. Why replace the generically disclosed pyrrolidine containing bases of Laurent with the quaternized bases of Lim? **Nothing** in either reference provides a motivation or suggestion of the **particular** desirability to modify the **specific** compositions of Laurent directed to slowing the rate color formation with the **particular** quaternized dyes of Lim, as opposed to any other possible oxidant base.

It is well settled that “[t]he examiner bears the initial burden of factually supporting any *prima facie* case of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under **no** obligation to submit evidence of nonobviousness.” MPEP § 2142. Because the Action fails to meet this evidentiary burden, Applicants respectfully request that the rejection of claims 1, 3-4, 6, 8, 11, and 22-48 as being obvious over Laurent in view of Lim and further in view of Cannell be reconsidered and withdrawn.